

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A signal output method comprising:

providing a write permission signal including a repetition of a write enable interval and a pause interval;

providing a write data signal to be output during the write enable interval;

outputting a write signal including the write permission signal and the write data signal; and

writing information to an optical information recording medium by using the write signal,

wherein T_{fmax} denotes an output interval of a first write data signal among write data signals corresponding to a write permission signal immediately subsequent to a pause interval of the write signal in a case in which the pause interval of the write signal is a maximum,

 T_{fmin} denotes an output interval of a first write data signal among the write data signals corresponding to a write permission signal immediately subsequent to the pause interval of the write signal in a case in which the pause interval of the write signal is a minimum,

 T denotes a reference period, and

wherein the write signal is outputted so that T_{fmax} , T_{fmin} and T satisfy the following formula (1):

AMENDMENT UNDER 37 C.F.R. § 1.114(c)
U.S. Appln. No. 10/749,380 (Q79247)

Formula (1): $T_{fmax} - T_{fmin} \geq 0.01T$, and

wherein T_{fmax} and T_{fmin} actively write information to the recording medium by forming a recording pit thereon.

2. (original): A signal output method according to claim 1, wherein the write signal is outputted so that T_{fmax} , T_{fmin} and T satisfy the following formula:

$$0.4T \geq T_{fmax} - T_{fmin} \geq 0.06T.$$

3. (original): A signal output method according to claim 1, wherein the write signal is outputted so that T_{fmax} , T_{fmin} and T satisfy the following formula:

$$T_{fmax} - T_{fmin} = 0.25T.$$

4. (original): A signal output method according to claim 1, wherein the write signal is outputted so that T_{fmax} , T_{fmin} and T satisfy the following formula:

$$T_{fmax} - T_{fmin} = 0.15T.$$

5. (original): A signal output method according to claim 1, wherein the write signal is outputted so that T_{fmax} , T_{fmin} and T satisfy the following formulae:

$$1.8T \geq T_{fmax} \geq 0.5T$$

$$1.8T \geq T_{fmin} \geq 0.5T.$$

AMENDMENT UNDER 37 C.F.R. § 1.114(c)
U.S. Appln. No. 10/749,380 (Q79247)

6. (original): A signal output method according to claim 1, wherein the write signal is outputted so that T_{fmax} , T_{fmin} and T satisfy the following formulae:

$$1.5T \geq T_{fmax} \geq 0.7T$$

$$1.5T \geq T_{fmin} \geq 0.7T.$$

7. (original): A signal output method according to claim 1, wherein when T_{mp} denotes an output interval of each write data signal except the first and the last write data signals among the write data signals, the write signal is outputted so that T_{mp} and T satisfy the following formula:

$$0.84T \geq T_{mp} \geq 0.4T.$$

8. (original): A signal output method according to claim 1, wherein when T_{mp} denotes an output interval of each write data signal except the first and the last write data signals among the write data signals, the write signal is outputted so that T_{mp} and T satisfy the following formula:

$$0.78T \geq T_{mp} \geq 0.6T.$$

9. (currently amended): A signal output method comprising:
providing a write permission signal including a repetition of a write enable interval and a pause interval;
providing a write data signal to be output during the write enable interval;

AMENDMENT UNDER 37 C.F.R. § 1.114(c)
U.S. Appl. No. 10/749,380 (Q79247)

outputting a write signal including the write permission signal and the write data signal; and

writing information to an optical information recording medium by using the write signal,

wherein T_{lmax} denotes an output interval of a last write data signal among write data signals corresponding to a write permission signal immediately preceding a pause interval of the write signal in a case in which the pause interval of the write signal is a maximum,

T_{lmin} denotes an output interval of the last write data signal among the write data signals corresponding to a write permission signal immediately preceding the pause interval of the write signal in a case in which the pause interval of the write signal is a minimum,

T denotes a reference period, and

wherein the write signal is outputted so that T_{lmax} , T_{lmin} and T satisfy the following formula (2):

Formula (2): $T_{lmin} - T_{lmax} \geq 0.01T$, and

wherein T_{lmax} and T_{lmin} actively write information to the recording medium by forming a recording pit thereon.

10. (original): A signal output method according to claim 9, wherein the write signal is outputted so that T_{lmax} , T_{lmin} and T satisfy the following formula:

$$0.4T \geq T_{lmin} - T_{lmax} \geq 0.06T.$$

AMENDMENT UNDER 37 C.F.R. § 1.114(c)
U.S. Appln. No. 10/749,380 (Q79247)

11. (original): A signal output method according to claim 9, wherein the write signal is outputted so that T_{lmax} , T_{lmin} and T satisfy the following formula:

$$T_{lmin} - T_{lmax} = 0.25T.$$

12. (original): A signal output method according to claim 9, wherein the write signal is outputted so that T_{lmax} , T_{lmin} and T satisfy the following formula:

$$T_{lmin} - T_{lmax} = 0.15T.$$

13. (original): A signal output method according to claim 9, wherein the write signal is outputted so that T_{lmax} , T_{lmin} and T satisfy the following formulae:

$$0.9T \geq T_{lmax} \geq 0.2T$$

$$0.9T \geq T_{lmin} \geq 0.2T.$$

14. (original): A signal output method according to claim 9, wherein the write signal is outputted so that T_{lmax} , T_{lmin} and T satisfy the following formulae:

$$0.7T \geq T_{lmax} \geq 0.3T$$

$$0.7T \geq T_{lmin} \geq 0.3T.$$

15. (original): A signal output method according to claim 9, wherein when T_{mp} denotes an output interval of each write data signal except first and last write data signals among write data signals, the write signal is outputted so that T_{mp} and T satisfy the following formula:

$$0.84T \geq T_{mp} \geq 0.4T.$$

AMENDMENT UNDER 37 C.F.R. § 1.114(c)
U.S. Appl. No. 10/749,380 (Q79247)

16. (original): A signal output method according to claim 9, wherein when Tmp denotes an output interval of each write data signal except first and last write data signals among write data signals, the write signal is outputted so that Tmp and T satisfy the following formula:

$$0.78T \geq Tmp \geq 0.6T.$$

17. (original): A signal output method according to claim 9, wherein
Tfmax denotes an output interval of a first write data signal among write data signals corresponding to a write permission signal immediately subsequent to a pause interval of the write signal in the case in which the pause interval of the write signal is the maximum,

Tfmin denotes an output interval of a first write data signal among the write data signals corresponding to a write permission signal immediately subsequent to a pause interval of the write signal in the case in which the pause interval of the write signal is the minimum, and

wherein the write signal is outputted so that Tfmax, Tfmin and T satisfy the following formula (1):

$$\text{Formula (1): } Tfmax - Tfmin \geq 0.01T.$$

18. (currently amended): An optical information recording medium having information recorded thereon by using a signal output method, the signal output method comprising:

providing a write permission signal including a repetition of a write enable interval and a pause interval;

AMENDMENT UNDER 37 C.F.R. § 1.114(c)
U.S. Appln. No. 10/749,380 (Q79247)

providing a write data signal to be output during the write enable interval;
outputting a write signal including the write permission signal and the write data
signal; and

writing information to an optical information recording medium by using the
write signal,

wherein T_{fmax} denotes an output interval of a first write data signal among write
data signals corresponding to a write permission signal immediately subsequent to a pause
interval of the write signal in a case in which the pause interval of the write signal is a maximum,

T_{fmin} denotes an output interval of a first write data signal among the write data
signals corresponding to a write permission signal immediately subsequent to the pause interval
of the write signal in a case in which the pause interval of the write signal is a minimum,

T denotes a reference period, and

wherein the write signal is outputted so that T_{fmax} , T_{fmin} and T satisfy the
following formula (1):

Formula (1): $T_{fmax} - T_{fmin} \geq 0.01T$, and

wherein T_{fmax} and T_{fmin} actively write information to the recording medium by
forming a recording pit thereon.

19. (original): An optical information recording medium according to claim 18,
wherein information can be recorded thereon by using a laser beam having a wavelength in the
range of 350 nm to 500 nm.

AMENDMENT UNDER 37 C.F.R. § 1.114(c)
U.S. Appln. No. 10/749,380 (Q79247)

20. (original): An optical information recording medium according to claim 18, wherein the optical information recording medium is a write once type and a dye type.

21. (currently amended): An optical information recording medium having information recorded thereon by using a signal output method, the signal output method comprising:

providing a write permission signal including a repetition of a write enable interval and a pause interval;

providing a write data signal to be output during the write enable interval;

outputting a write signal including the write permission signal and the write data signal; and

writing information to an optical information recording medium by using the write signal,

wherein T_{lmax} denotes an output interval of a last write data signal among write data signals corresponding to a write permission signal immediately preceding a pause interval of the write signal in a case in which the pause interval of the write signal is a maximum,

T_{lmin} denotes an output interval of the last write data signal among the write data signals corresponding to a write permission signal immediately preceding the pause interval of the write signal in a case in which the pause interval of the write signal is a minimum,

T denotes a reference period, and

AMENDMENT UNDER 37 C.F.R. § 1.114(c)
U.S. Appl. No. 10/749,380 (Q79247)

wherein the write signal is outputted so that T_{lmax} , T_{lmin} and T satisfy the following formula (2):

Formula (2): $T_{lmin} - T_{lmax} \geq 0.01T$, and

wherein T_{lmax} and T_{lmin} actively write information to the recording medium by forming a recording pit thereon.

22. (original): An optical information recording medium according to claim 21, wherein information can be recorded thereon by using a laser beam having a wavelength in the range of 350 nm to 500 nm.

23. (original): An optical information recording medium according to claim 21, wherein the optical information recording medium is a write once type and a dye type.

24. (previously presented): A signal output method according to claim 1, further comprising:

setting one of a plurality of recording strategies according to a recording speed magnification; and

modulating at least one of $T_{f_{max}}$ and $T_{f_{min}}$ according to the set recording strategy, wherein the pause interval is set by the set recording strategy.

AMENDMENT UNDER 37 C.F.R. § 1.114(c)
U.S. Appl. No. 10/749,380 (Q79247)

25. (previously presented): A signal output method according to claim 9, further comprising:
 setting one of a plurality of recording strategies according to a recording speed magnification; and
 modulating at least one of Tl_{\max} and Tl_{\min} according to the set recording strategy, wherein the pause interval is set by the set recording strategy.

26. (previously presented): A signal output method according to claim 17, further comprising:
 setting one of a plurality of recording strategies according to a recording speed magnification; and
 modulating at least one of Tf_{\max} and Tf_{\min} according to the set recording strategy, wherein the pause interval is set by the set recording strategy.

27. (previously presented): An optical information recording medium according to claim 18, wherein the signal output method further comprises:
 setting one of a plurality of recording strategies according to a recording speed magnification; and
 modulating at least one of Tf_{\max} and Tf_{\min} according to the set recording strategy, wherein the pause interval is set by the set recording strategy.

AMENDMENT UNDER 37 C.F.R. § 1.114(c)
U.S. Appln. No. 10/749,380 (Q79247)

28. (previously presented): An optical information recording medium according to claim 21, wherein the signal output method further comprises:

setting one of a plurality of recording strategies according to a recording speed magnification; and

modulating at least one of $T_{l_{max}}$ and $T_{l_{min}}$ according to the set recording strategy, wherein the pause interval is set by the set recording strategy.

29. (new): A signal output method according to claim 1, wherein,
each of the write data signals form a recording pit on a recording medium for recording information thereon; and

recording pits are not formed during a pause interval.

30. (new): A signal output method according to claim 29, wherein the formation of a pit at a first single signal level and non-formation of a pit at a second single signal level are in a binary sequence with each other.

31. (new): A signal output method according to claim 9, wherein,
each of the write data signals form a recording pit on a recording medium for recording information thereon; and

recording pits are not formed during a pause interval.

AMENDMENT UNDER 37 C.F.R. § 1.114(c)
U.S. Appln. No. 10/749,380 (Q79247)

32. (new): A signal output method according to claim 31, wherein the formation of a pit at a first single signal level and non-formation of a pit at a second single signal level are in a binary sequence with each other.

33. (new): An optical information recording medium according to claim 18, wherein,
each of the write data signals form a recording pit on the optical information recording medium for recording information thereon; and
recording pits are not formed during a pause interval.

34. (new): An optical information recording medium according to claim 33, wherein the formation of a pit at a first single signal level and non-formation of a pit at a second single signal level are in a binary sequence with each other.

35. (new): An optical information recording medium according to claim 21, wherein,
each of the write data signals form a recording pit on the optical information recording medium for recording information thereon; and
recording pits are not formed during a pause interval.

36. (new): An optical information recording medium according to claim 35, wherein the formation of a pit at a first single signal level and non-formation of a pit at a second single signal level are in a binary sequence with each other.